

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for distributing multicast traffic in a layer 2 network, said method comprising:

forming a multicast distribution tree based on a spanning tree defined within said layer 2 network; and

forwarding multicast traffic from a switch within said layer 2 network, via said multicast distribution tree;

wherein said multicast traffic is forwarded to a media access control address assigned to a multicast distribution group.

Claim 2 (currently amended): A method for operating a node in a layer 2 network to handle multicast traffic, said method comprising:

receiving at a switch, via a first port, a join message for a multicast distribution group;

establishing state information for said multicast distribution group based on said join message, if such state information has not already been established; and

adding said first port to a port list associated with said state information, said port list being used to select ports for forwarding received multicast traffic of said multicast distribution group; and

forwarding said join message towards a root bridge of said layer 2 network via a spanning tree of said layer 2 network.

Claim 3 (canceled).

Claim 4 (original): The method of claim 2 wherein said join message comprises an IGMP Join message.

Claim 5 (original): The method of claim 2 further comprising:
flooding said join message via a spanning tree of said layer 2 network.

Claim 6 (original): The method of claim 2 further comprising:
forwarding said join message via one or more ports via which an attraction point advertisement message was previously received.

Claim 7 (currently amended): ~~A~~ The method of claim 2 further for operating a node in a layer 2 network to handle multicast traffic, said method comprising:
receiving multicast traffic addressed to a said multicast distribution group; and
sending said multicast traffic toward a root bridge via a said spanning tree of said layer 2 network.

Claim 8 (original): The method of claim 7 further comprising:
forwarding said multicast traffic via one or more ports via which a said join message was received earlier.

Claim 9 (canceled).

Claim 10 (currently amended): A method for operating a node in a layer 2 network to handle multicast traffic, said method comprising:

receiving at a switch within said layer 2 network, multicast traffic addressed to a media access control address assigned to a multicast distribution group;

forwarding said multicast traffic from the switch, via one or more ports via which a join message was received earlier.

Claim 11 (original): The method of claim 10 further comprising:

establishing state information for said multicast distribution group if such state information has not already been established.

Claim 12 (currently amended): A method for operating a node in a layer 2 network to handle multicast traffic, said method comprising:

receiving multicast traffic at a switch within said layer 2 network, from a neighbor node in said layer 2 network, said multicast traffic being addressed to a multicast distribution group; and

in response to said multicast traffic, flooding an advertisement message throughout said layer 2 network via a spanning tree of said layer 2 network, said advertisement message establishing said node as an attraction point for said multicast distribution group.

Claim 13 (currently amended): A method for operating a node in a layer 2 network to handle multicast traffic, said method comprising:

receiving at a switch within said layer 2 network, via a first port, an advertisement message identifying an attraction point for multicast traffic addressed to a multicast distribution group; and

propagating said advertisement message further through said layer 2 network via a spanning tree of said layer 2 network.

Claim 14 (original): The method of claim 13 further comprising:

establishing state information for said multicast distribution group if such state information has not already been established; and

adding said first port to a source port list of said multicast distribution group.

Claim 15 (currently amended): A computer-readable storage medium for use in distributing multicast traffic in a layer 2 network, said storage medium located at a switch within said layer 2 network and having stored thereon:

code that causes formation of a multicast distribution tree based on a spanning tree defined within said layer 2 network; and

code that causes forwarding of multicast traffic via said multicast distribution tree;

wherein said multicast traffic is forwarded to a media access control address assigned to a multicast distribution group.

Claim 16 (currently amended): A computer-readable storage medium for use in operating a node in a layer 2 network to handle multicast traffic, said storage medium located at a switch in said layer 2 network and having stored thereon:

code that causes reception of, via a first port, a join message for a multicast distribution group;

code that causes establishment of state information for said multicast distribution group based on said join message, if such state information has not already been established; and

code that causes addition of said first port to a port list associated with said state information, said port list being used to select ports for forwarding received multicast traffic of said multicast distribution group; and

code that forwards said join message towards a root bridge of said layer 2 network via a spanning tree of said layer 2 network.

Claim 17 (canceled).

Claim 18 (original): The storage medium of claim 16 wherein said join message comprises an IGMP Join message.

Claim 19 (original): The storage medium of claim 16 having further stored thereon:

code that causes flooding of said join message via a spanning tree of said layer 2 network.

Claim 20 (original): The storage medium of claim 16 having further stored thereon:

code that causes forwarding of said join message via one or more ports via which an attraction point advertisement message was previously received.

Claim 21 (currently amended): TheA computer-readable storage medium of claim 16 for use in operating a node in a layer 2 network to handle multicast traffic, said storage medium having stored thereon instructions comprising: code that causes reception of multicast traffic addressed to a said multicast distribution group; and

code that causes sending of said multicast traffic toward a root bridge via a spanning tree of said layer 2 network.

Claim 22 (currently amended): The storage medium of claim 21 wherein said instructions further comprise:

code that causes forwarding of said multicast traffic via one or more ports via which a said join message was received earlier.

Claim 23 (canceled).

Claim 24 (currently amended): A computer-readable storage medium for use in operating a node in a layer 2 network to handle multicast traffic, said computer-readable storage medium located at a switch within said layer 2 network and having instructions stored thereon, said instructions comprising:

code that causes reception of multicast traffic addressed to a multicast distribution group; and

code that causes forwarding of said multicast traffic via one or more ports via which a join message was received earlier.

Claim 25 (original): The storage medium of claim 24 wherein said instructions further comprise:

code that causes establishment of state information for said multicast distribution group if such state information has not already been established.

Claim 26 (currently amended): A computer-readable storage medium for use in operating a node in a layer 2 network to handle multicast traffic, said storage medium located at a switch in said layer 2 network and having instruction stored thereon, said instructions comprising:

code that causes reception of multicast traffic from a neighbor node in said layer 2 network, said multicast traffic being addressed to a multicast distribution group; and

code that causes, in response to said multicast traffic, flooding of an advertisement message throughout said layer 2 network via a spanning tree of said layer 2 network, said advertisement message establishing said node as an attraction point for said multicast distribution group.

Claim 27 (currently amended): A computer-readable storage medium for operating a node in a layer 2 network to handle multicast traffic, said computer-readable storage medium located at a switch in said layer 2 network and having instructions stored thereon, said instructions comprising:

code that causes reception of, via a first port, an advertisement message identifying an attraction point for multicast traffic addressed to a multicast distribution group; and

code that causes propagation of said advertisement message further through said layer 2 network via a spanning tree of said layer 2 network.

Claim 28 (original): The storage medium of claim 27 wherein said instructions further comprise:

code that causes establishment of state information for said multicast distribution group if such state information has not already been established; and

code that causes addition of said first port to a source port list of said multicast distribution group.

Claim 29 (currently amended): Apparatus for distributing multicast traffic in a layer 2 network, said apparatus comprising:

means for forming a multicast distribution tree based on a spanning tree defined within said layer 2 network; and

means for forwarding multicast traffic from a switch within said layer 2 network, via said multicast distribution tree;

wherein said multicast traffic is forwarded to a media access control address assigned to a multicast distribution group.

Claim 30 (currently amended): Apparatus for operating a node in a layer 2 network to handle multicast traffic, said apparatus comprising a switch within said layer 2 network, the switch comprising:

a processor that executes instructions; and

a memory device that stores said instructions, said instructions comprising:

code that causes reception of, via a first port, a join message for a multicast distribution group; and

code that causes establishment of state information for said multicast distribution group based on said join message, if such state information has not already been established; and

code that causes addition of said first port to a port list associated with said state information, said port list being used to select ports for forwarding received multicast traffic of said multicast distribution group; and

forwarding said join message towards a root bridge of said layer 2 network via a spanning tree of said layer 2 network.